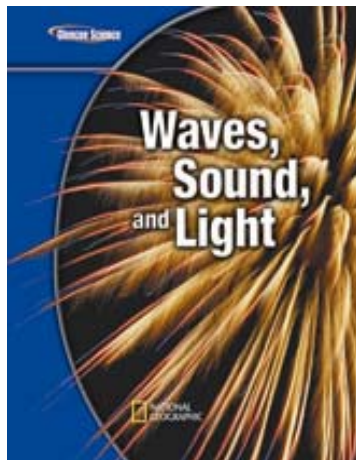
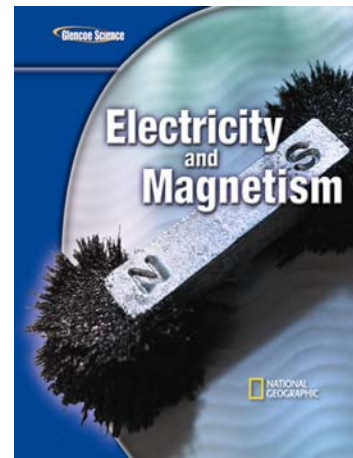


*The Nature of Matter K*  
*Chemistry L*  
*Motion, Forces, and Energy M*  
*Electricity and Magnetism N*  
*Waves, Sound, and Light O*



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STANDARDS	PAGE REFERENCES
<b>Grade Level Expectation: Eighth Grade</b>	
<b>Concepts and skills students master:</b> 1. Identify and calculate the direction and magnitude of forces that act on an object, and explain the results in the object's change of motion	
<b>Evidence Outcomes</b>	
<b>Students can:</b> a. Predict and evaluate the movement of an object by examining the forces applied to it	<b>Student Edition:</b> (M) 36-52 <i>Design Your Own Lab</i> 56-57 <i>Lab</i> 55 <i>Launch Lab</i> 35 <i>MiniLab</i> 40  <b>Teacher Wraparound Edition:</b> (M) A 38, 45, 54; CU 41; IL 12, 50; IM 44; LD 53; QD 38, 48; SJ 47
b. Use mathematical expressions to describe the movement of an object	<b>Student Edition:</b> (M) 10-11, 16-17, 42 <i>Applying Math</i> 10, 16, 45 <i>Design Your Own Lab</i> 56-57 <i>Lab</i> 55 <i>MiniLab</i> 11  <b>Teacher Wraparound Edition:</b> (M) A 11, 12, 17, 45; CU 13, 18
c. Develop and design a scientific investigation to collect and analyze speed and acceleration data to determine the net forces acting on a moving object	<b>Student Edition:</b> (M) <i>Design Your Own Lab</i> 56-57 <i>Lab</i> 55  <b>Teacher Wraparound Edition:</b> (M) A 45

STANDARDS	PAGE REFERENCES
<p><b>Concepts and skills students master:</b></p> <p>2. There are different forms of energy, and those forms of energy can be changed from one form to another – but total energy is conserved</p>	
<p><b>Evidence Outcomes</b></p>	
<p><b>Students can:</b></p> <p>a. Gather, analyze, and interpret data to describe the different forms of energy and energy transfer</p>	<p><b>Student Edition:</b></p> <p>(K) <i>Lab 53</i> <i>MiniLab 50</i></p> <p>(L) <i>Design Your Own Lab 54-55</i></p> <p>(M) <i>Lab 168</i> <i>Launch Lab 125</i> <i>MiniLab 164, 165</i> <i>Use the Internet Lab 148-149</i></p> <p>(N) <i>Lab 27</i></p> <p>(O) <i>Design Your Own Lab 86-87</i> <i>Lab 46, 107</i> <i>Launch Lab 7, 65</i></p> <p><b>Teacher Wraparound Edition:</b></p> <p>(K) QD 51; SJ 46</p> <p>(L) AIL 54</p> <p>(M) A 128; IL 127, 163; LD 166; MM 166</p> <p>(N) AIL 28; LD 17</p> <p>(O) LD 38; QD 10, 37</p>

STANDARDS	PAGE REFERENCES
<p>b. Develop a research-based analysis of different forms of energy and energy transfer</p>	<p><b>Student Edition:</b></p> <p>(K) 45-46 <i>Integrate Physics</i> 46 <i>Lab</i> 53</p> <p>(L) 42-45 <i>Design Your Own Lab</i> 54-55</p> <p>(M) 126-130, 161-165 <i>Lab</i> 168 <i>Launch Lab</i> 125 <i>MiniLab</i> 164, 165 <i>Use the Internet Lab</i> 148-149</p> <p>(N) 16-17 <i>Lab</i> 27</p> <p>(O) 8-12, 66, 70, 96 <i>Design Your Own Lab</i> 86-87 <i>Lab</i> 46, 107 <i>Launch Lab</i> 7, 65</p> <p><b>Teacher Wraparound Edition:</b></p> <p>(K) DI 48; SJ 46</p> <p>(L) AIL 54; SJ 44</p> <p>(M) A 128; IL 127, 163; MM 166; SJ 129</p> <p>(N) AIL 28; LD 17</p> <p>(O) LD 38; QD 10</p>
<p>c. Use research-based models to describe energy transfer mechanisms, and predict amounts of energy transferred</p>	<p><b>Student Edition:</b></p> <p>(M) 162-165 <i>Design Your Own Lab</i> 174-175 <i>Lab</i> 168 <i>MiniLab</i> 164, 165</p> <p>(N) <i>Lab</i> 28-29</p> <p>(O) <i>Design Your Own Lab</i> 86-87 <i>Launch Lab</i> 7 <i>MiniLab</i> 11</p> <p><b>Teacher Wraparound Edition:</b></p> <p>(M) IL 163; LD 166; MM 166</p> <p>(N) AIL 28</p> <p>(O) LD 38; QD 10</p>

STANDARDS	PAGE REFERENCES
<p><b>Concepts and skills students master:</b></p> <p>3. Distinguish between physical and chemical changes, noting that mass is conserved during any change</p>	
<p><b>Students can:</b></p> <p>a. Identify the distinguishing characteristics between a chemical and a physical change</p>	<p><b>Student Edition:</b></p> <p>(K) 78-85 <i>MiniLab</i> 81</p> <p>(L) 36 <i>Design Your Own Lab</i> 54-55 <i>Lab</i> 53 <i>National Geographic</i> 37</p> <p><b>Teacher Wraparound Edition:</b></p> <p>(K) CU 87; DI 81; IL 82; IM 85; SJ 82</p> <p>(L) A 37; QD 39</p>
<p>b. Gather, analyze, and interpret data on physical and chemical changes</p>	<p><b>Student Edition:</b></p> <p>(K) <i>MiniLab</i> 81</p> <p>(L) <i>Design Your Own Lab</i> 54-55 <i>Lab</i> 53 <i>Launch Lab</i> 35 <i>MiniLab</i> 40</p> <p><b>Teacher Wraparound Edition:</b></p> <p>(K) IL 82</p> <p>(L) A 37; AIL 54; QD 39</p>
<p>c. Gather, analyze, and interpret data that show mass is conserved in a given chemical or physical change</p>	<p><b>Student Edition:</b></p> <p>(L) <i>Applying Math</i> 42 <i>MiniLab</i> 40</p> <p><b>Teacher Wraparound Edition:</b></p> <p>(L) DI 41</p>
<p>d. Identify evidence that suggests that matter is always conserved in physical and chemical changes</p>	<p><b>Student Edition:</b></p> <p>(K) 87</p> <p>(L) 40-41 <i>Applying Math</i> 42 <i>MiniLab</i> 40</p> <p><b>Teacher Wraparound Edition:</b></p> <p>(L) DI 41; VL 40</p>
<p>e. Examine, evaluate, question, and ethically use information from a variety of sources and media to investigate physical and chemical changes</p>	<p><b>Student Edition:</b></p> <p>(K) <i>Science Online</i> 81 <i>Science Stats</i> 90</p> <p>(L) <i>Communicating Your Data</i> 53, 55</p> <p><b>Teacher Wraparound Edition:</b></p> <p>(K) A 86; CD 80; DI 81</p> <p>(L) DI 39</p>

STANDARDS	PAGE REFERENCES
<p><b>Concepts and skills students master:</b></p> <p>4. Recognize that waves such as electromagnetic, sound, seismic, and water have common characteristics and unique properties</p>	
<p><b>Students can:</b></p> <p>a. Compare and contrast different types of waves</p>	<p><b>Student Edition:</b></p> <p>(O) 8-12, 36-37, 66, 71-77, 96-97  <i>Lab 18, 46, 107</i>  <i>Science Stats 28</i></p> <p><b>Teacher Wraparound Edition:</b></p> <p>(O) A 10, 46, 70; CB 28; TPK 8, 36, 96</p>
<p>b. Describe for various waves the amplitude, frequency, wavelength, and speed</p>	<p><b>Student Edition:</b></p> <p>(O) 13-17, 38-40, 69-70  <i>Design Your Own Lab 26-27, 56-57, 86-87</i>  <i>Integrate Health 16</i>  <i>Lab 18</i></p> <p><b>Teacher Wraparound Edition:</b></p> <p>(O) A 15, 16; AIL 26; CU 17; D 40; QD 16; R 17</p>
<p>c. Describe the relationship between pitch and frequency in sound</p>	<p><b>Student Edition:</b></p> <p>(O) 16, 40  <i>Design Your Own Lab 56-57</i>  <i>Launch Lab 35</i></p> <p><b>Teacher Wraparound Edition:</b></p> <p>(O) A 17; D 40; QD 16; R 45</p>
<p>d. Develop and design a scientific investigation regarding absorption, reflection, and refraction of light</p>	<p><b>Student Edition:</b></p> <p>(O) <i>Lab 107, 118-119</i>  <i>Launch Lab 95</i></p> <p><b>Teacher Wraparound Edition:</b></p> <p>(O) AIL 118; IL 104</p>
<p><b>Grade Level Expectation: Seventh Grade</b></p>	
<p><b>Concepts and skills students master:</b></p> <p>1. Mixtures of substances can be separated based on their properties such as solubility, boiling points, magnetic properties, and densities</p>	
<p><b>Evidence Outcomes</b></p>	
<p><b>Students can:</b></p> <p>a. Identify properties of substances in a mixture that could be used to separate those substances from each other</p>	<p><b>Student Edition:</b></p> <p>(K) 28  <i>Science Online 28</i></p> <p>(L) 65</p> <p><b>Teacher Wraparound Edition:</b></p> <p>(K) A 29; R 29</p> <p>(L) VL 65</p>

STANDARDS	PAGE REFERENCES
b. Develop and design a scientific investigation to separate the components of a mixture	<b>Student Edition:</b> (K) <i>Section Review 29 #2</i> <b>Teacher Wraparound Edition:</b> (K) A 29; AIL 30 (L) DI 67
<b>Grade Level Expectation: Sixth Grade</b>	
<b>Concepts and skills students master:</b> 1. All matter is made of atoms, which are far too small to see directly through a light microscope. Elements have unique atoms and thus, unique properties. Atoms themselves are made of even smaller particles	
<b>Evidence Outcomes</b>	
<b>Students can:</b> a. Identify evidence that suggests there is a fundamental building block of matter	<b>Student Edition:</b> (K) 8-18, 87 (L) 8-9, 40, 64 <i>MiniLab 40</i> <i>Model and Invent Lab 26-27</i> <b>Teacher Wraparound Edition:</b> (K) A 19; SCB 6E; TPK 8, 25; UA 9 (L) TPK 8; VL 40
b. Use the particle model of matter to illustrate characteristics of different substances	<b>Student Edition:</b> (K) 40-52 (L) 69, 71-72 <i>National Geographic 22</i> <b>Teacher Wraparound Edition:</b> (K) A 42, 48; CU 52; LD 43; MM 41; QD 44; TFYI 41 (L) DI 22; VL 71
c. Develop an evidence based scientific explanation of the atomic model as the foundation for all chemistry	<b>Student Edition:</b> (K) 8-17 (L) 8-13, 16-20 <i>Lab 25</i> <i>Model and Invent Lab 26-27</i> <b>Teacher Wraparound Edition:</b> (K) D 14; MM 9, 13; R 17; SJ 10 (L) LD 10; R 24; TPK 8
d. Find and evaluate appropriate information from reference books, journals, magazines, online references, and databases to compare and contrast historical explanations for the nature of matter	<b>Student Edition:</b> (K) 8-17 <i>Science and History 32</i> <b>Teacher Wraparound Edition:</b> (K) D 21, 32; SCB 6E

STANDARDS	PAGE REFERENCES
<b>Grade Level Expectation: Sixth Grade</b>	
<b>Concepts and skills students master:</b> 2. Atoms may stick together in well-defined molecules or be packed together in large arrays. Different arrangements of atoms into groups compose all substances	
<b>Evidence Outcomes</b>	
<b>Students can:</b> a. Explain the similarities and differences between elements and compounds	<b>Student Edition:</b> (K) 9, 18, 25-26 <i>Chapter Review 35 #18</i> <i>Chapter Study Guide 33</i> <i>Section Review 29 #3</i> (L) 64 <b>Teacher Wraparound Edition:</b> (K) CU 29; D 27 (L) QD 66
b. Identify evidence suggesting that atoms form into molecules with different properties than their components	<b>Student Edition:</b> (K) 25-26, 80 <i>MiniLab 26</i> <i>Section Review 29 #6</i> (L) 19-20, 64, 70, 96-106 <i>Launch Lab 95</i> <i>MiniLab 19, 100</i> <b>Teacher Wraparound Edition:</b> (K) DI 27; TPK 25 (L) CU 106; QD 66, 98; VL 23, 104
c. Find and evaluate information from a variety of resources about molecules	<b>Student Edition:</b> (K) 25-26 <i>Section Review 29 #6</i> (L) 19-21, 70, 96-106 <i>Launch Lab 95</i> <i>MiniLab 19, 100</i> <i>Science Online 102</i> <b>Teacher Wraparound Edition:</b> (K) DI 27 (L) DI 71; LD 104; MM 40; VL 104

STANDARDS	PAGE REFERENCES
<p><b>Concepts and skills students master:</b></p> <p>3. The physical characteristics and changes of solid, liquid, and gas states can be explained using the particulate model</p>	
<p><b>Evidence Outcomes</b></p>	
<p><b>Students can:</b></p> <p>a. Explain how the arrangement and motion of particles in a substance such as water determine its state</p>	<p><b>Student Edition:</b></p> <p>(K) 40-44 <i>Standardized Test Practice 69 #23</i></p> <p><b>Teacher Wraparound Edition:</b></p> <p>(K) A 42, 48; MM 73; QD 44; TPK 45</p>
<p>b. Distinguish between changes in temperature and changes of state using the particle model of matter</p>	<p><b>Student Edition:</b></p> <p>(K) 47-52 <i>Lab 53</i></p> <p>(M) 158</p> <p><b>Teacher Wraparound Edition:</b></p> <p>(K) A 48; CU 52; D 49; IM 47</p>
<p><b>Concepts and skills students master:</b></p> <p>4. Distinguish among, explain, and apply the relationships among mass, weight, volume, and density</p>	
<p><b>Evidence Outcomes</b></p>	
<p><b>Students can:</b></p> <p>a. Explain that the mass of an object does not change, but its weight changes based on the gravitational forces acting upon it</p>	<p><b>Student Edition:</b></p> <p>(K) 74</p> <p>(M) 43-44</p> <p><b>Teacher Wraparound Edition:</b></p> <p>(M) DI 43</p>
<p>b. Predict how changes in acceleration due to gravity will affect the mass and weight of an object</p>	<p><b>Student Edition:</b></p> <p>(M) 43-44 <i>Section Review 48 #2</i></p>
<p>c. Predict how mass, weight, and volume affect density</p>	<p><b>Student Edition:</b></p> <p>(K) 59 <i>Design Your Own Lab 62-63</i></p> <p>(M) 78</p> <p><b>Teacher Wraparound Edition:</b></p> <p>(K) DI 58</p> <p>(M) A 78; R 80</p>

STANDARDS	PAGE REFERENCES
<p>d. Measure mass and volume, and use these quantities to calculate density</p>	<p><b>Student Edition:</b>            (K) 59  <i>Applying Math</i> 59  <i>Chapter Review</i> 67 #24  <i>Design Your Own Lab</i> 62-63            (M) 78  <i>Applying Science</i> 78  <b>Teacher Wraparound Edition:</b>            (K) A 59, 71</p>
<p>e. Use tools to gather, view, analyze, and report results for scientific investigations about the relationships among mass, weight, volume, and density</p>	<p><b>Student Edition:</b>            (K) <i>Design Your Own Lab</i> 62-63            (M) <i>Applying Science</i> 78  <b>Teacher Wraparound Edition:</b>            (K) A 61, 71            (M) A 78; R 80</p>